



Towards ‘good practice’ in the use of local and scientific knowledge for informing natural resource management

A workshop organised by the CAPARDUS H2020 project

Aasiaat, Greenland

29 November – 1 December 2022 (3 days)

Language: Greenlandic/English (simultaneous interpretation)

Summary of CAPARDUS

CAPARDUS is a H2020 project with focus on developing guidelines and standards in research, resource exploitation and management, shipping, tourism and community planning in the Arctic. The project contributes to develop, demonstrate, and widely circulate good practices. The project involves scientists, economic actors, local communities, managers and regulators. Workshops and dialogue meetings are used to discuss how the social-environmental systems are changing Arctic communities. The climate change and its consequences in the Arctic leads to new requirements for planning and decision-making based on scientific and economic data, assessments and predictions. A prerequisite for good planning is access to data and information of relevance to people living and working in the Arctic. Community-Based Monitoring (CBM) and Citizen Science (CS) initiatives are evolving across the Arctic, providing complementary data to the scientific observing systems. CBM/CS systems are initiated by people who need specific environmental and climate information to support management of resources, local decision-making and safety of human activities. An example is the PISUNA programme (*Piniakkanik Sumiiffinni Nalunaarsuineq*; <https://www.pisuna.org/>, <https://eloka-arctic.org/pisuna-net/en>). Challenges for CBM and CS projects in the Arctic are mainly to (1) bring CBM/CS systems from *ad hoc* initiatives to sustainable observing systems, (2) connect CBM/CS and scientific observations, (3) make use of CBM/CS data in decision-making, and (4) establish sustained funding.

Workshop objectives

- Review the future for how local knowledge can contribute to inform decision-making on natural resources, and explore how the financial and organizational sustainability of CBM programs can be assured, and how CBM and scientific observations can be connected
- Work towards development of global ‘good practice’ guidelines in community-based monitoring and management of natural resources
- Test a software tool that can guide decision-making in complex social-ecological systems with limited scientific data but substantial local knowledge
- Discuss how an Arctic Practice System should be connected to CBM/CS systems – and what would be the benefit

Programme, version 15 Nov. 2022

Monday 28 November: Travel to Aasiaat

International participants: Flights from Copenhagen airport at 09.00 by Air Greenland, arrival Aasiaat 12.10 (duration 7 h 10 min)

Check-in at Hotel Sømandshjemmet, Aasiaat, tel. +299 892711, aasiaat@soemandshjem.gl

Tuesday 29 November 0900-16.00: How is the future for the use of local knowledge to inform decision-making on natural resources – Forsamlingshuset Aasiaat

We will together undertake a review of the future for how local knowledge can contribute to inform decision-making on natural resources. Moreover, we will explore how the financial and organizational sustainability of CBM programs can be assured, and how CBM and scientific data can be connected in practice when this is relevant

9:00-9:20 Welcome (proposed)

Mayor Ane Hansen, Qeqertalik Municipality

Naalakkersuisoq Karl Tobiassen (Minister of Fisheries and Hunting)

9:20-9:30 Intro: Finn Danielsen, Martin Enghoff, Michael K. Poulsen

9:30-11:00 How do you see the future for local knowledge to inform decision-making on natural resources in Greenland: Should local knowledge be further used for informing decision-making? How?

Representatives of the responsible authorities:

1. Naalakkersuisoq Karl Tobiassen (Minister of Fisheries and Hunting, proposed, 15 min.)

2. APN Hunting, Amalie Jessen

3. APN Fisheries, Robin Holmvang

4. Råstofstyrelsen, Rannvá Clementsen / Rasmus Lindholm

5. Miljøstyrelsen for Råstofområdet, Steen Christensen

6. Qeqertalik Municipality, Hans Inûsugtoq (proposed)

(10 minutes each).

11:00-11:15 Coffee break

11:15-12.00 Perspectives from organizations and institutions:

1. KNAPK (Association of Fishers and Hunters), Nikkulaat Jeremiassen / Henning Dalager

2. Piniakkanik Sumiiffinni Nalunaarsuineq (PISUNA) in Attu, Nuunoq (Per Ole) Frederiksen

3. Greenland Institute of Natural Resources, Dept. Fish & Shellfish, Rasmus Nygaard

4. Oceans North Kalaallit Nunaat, Parnuna Egede

(10 minutes each).

12:00-13:00 Lunch

- 13:00-14:00 How can the financial and organizational sustainability of CBM programs be assured? Lessons from case examples, followed by discussion in plenum
Presentations by resource persons:
1. Bering Sea, Indigenous Sentinels Network, Hannah-Marie Garcia (15 minutes)
 2. Greenland, Sustainable Fisheries Greenland, Rasmus Hedeholm (5 minutes)
 3. Alaska, Arctic Observatory & Knowledge Hub, Donna Hauser & Roberta Glenn (video, 5 minutes)
 4. Brazil, Kirsten Silvius & Pedro Constantino (video, 5 minutes)
- Plenum: Discussion of priorities / necessary tasks ahead
- 14:00-14:15 Coffee break
- 14:15-16:00 How can CBM and scientific data be connected in practice for management decision-making when this is relevant? Lessons from case example, followed by discussion in plenum
- Presentation by resource persons:
4. Greenland Institute of Natural Resources, Dept. Mammals & Birds, Rikke G. Hansen (10 minutes)
 5. Universidade de Brasília, Braulio de Souza Diaz (10 minutes)
 6. Jessica Lefevre (20 minutes)
- Plenum: Discussion of priorities / necessary tasks ahead
- 19:00 Dinner at restaurant (hosted): Restaurant Nanoq, Fr. Lyngesvej 12

Wednesday 30 November 0900-16.00: Towards the development of global ‘good practice’ guidelines in community-based monitoring and management of natural resources

In 2015, the “Manaus Letter: recommendations for the Participatory Monitoring of Biodiversity” was published (Link: <http://dx.doi.org/10.25607/OBP-965>). This is a guideline comprising 40 recommendations for practitioners who organize, or develop capacity in, community monitoring of natural resource systems and the environment. The guideline was developed by 220 participants from 18 countries, inc. Greenland and Alaska. It was prepared by invitation of the Convention on Biological Diversity Secretariat at the “International Seminar on Participatory Monitoring of Biodiversity for the Management of Natural Resources” in Manaus, Brazil, Sep. 22–26, 2014. Based on case studies from different regions, we will discuss if it is meaningful to update this guideline and promote its broader use across the Arctic and globally.

- 9:00-9:10 Intro: Finn Danielsen, Martin Enghoff, Michael K. Poulsen
- 9:10-9:25 The Manaus Letter process (Herizo Andrianandrasana, University of Warwick, UK) (15 minutes)
- 9:25-9:40 CBM in international processes of the Convention on Biological Diversity - and future perspectives (Braulio de Souza Diaz, former Head of Secretariat, CBD & Professor, Universidade de Brasília, Brazil) (15 minutes)
- 9:40-9:55 Coffee break

- 9:55-12:00 Are the 40 recommendations in the Manaus Letter still relevant, or are some of them no longer helpful? Are there new recommendations that are also important?
Case examples (followed by questions/answers)
7. Greenland, Caroline Bouchard (3 slides, 5 minutes)
 8. Arctic Russia, Kobe University, Japan, Yuka Oishi (15 minutes)
 9. Bering Sea, Indigenous Sentinels Network, Hannah-Marie Garcia (5 minutes)
 10. Brazil, Kirsten Silvius & Pedro Constantino (video, 5 minutes)
 11. Alaska Arctic Observatory & Knowledge Hub, Donna Hauser & Roberta Glenn (video, 5 minutes)
 12. Alaska, Jessica Lefevre (5 minutes)

12:00-13:00 Lunch

13:00-14:30 Group work. Questions: How can an updated Manaus Letter be completed and more widely disseminated? For example, what can be recommended with regards to sustaining and financially securing CBM programs? Would it be helpful if an international institution would 'host' the guidelines as a 'standard' on CBM?

14:30-15:00 Coffee break

15:00-16:00 Plenum. Presentation of group findings. Discussion of priorities / necessary tasks ahead

Thursday 1 December 9:00-12:00: Excursion.

Boat trip to Disko Bugt. Alternatively, guided walking tour in Aasiaat town, dependent on the weather

12:00-12:30 Lunch

12:30-15:00: Session about a software tool that can guide decision-making in complex social-environmental systems (led by Roel May, Birger Poppel, Vivianne Mazzocco) – Forsamlingshuset Aasiaat
Statistical models have considerable potential to guide decision-making in areas characterized by limited scientific data and substantial local knowledge.

12:30-12:45 Introduction to the use of Bayesian (BBN) models in natural resource management and CBM-programmes: Roel May

12:45-13:00 Demo of the surBayes tool: Roel May

13:00-13:30 Plenum discussion: In which natural resource management contexts and CBM situations in the Arctic could BBN models be used for scenario assessments?

13:30-14:30 Group work: Build your own BBN model using the surBayes app.

14:30-15:00 Plenum discussion: Strengths and weaknesses of BBN models. What is their usefulness and how can they guide decision-making? Coffee/tea available

15:00-16:30: Session on Arctic Practice System (led by Siri Jodha Khalsa, Stein Sandven)

An Arctic Practices System (APS) is envisioned to be a sustained repository for practices related to environmental observations, resource exploitation and other activities in the Arctic. A 'practice' means a documentation in digital form of how things are done for example in observation of a specific ocean phenomenon. What an APS should do will be identified in dialogue with people living or working in the Arctic with knowledge about practices in their daily work. An example of Arctic practices is found at <https://repository.oceanbestpractices.org/handle/11329/1291>, where you can give keywords and the repository will identify documents containing those keywords.

15:00-15:10 Introduction to the concept of an Arctic Practice System (APS)

15:10-15:30 Demo of Arctic Community in the established Ocean Best Practice System (OPBS), where more than 100 Arctic Practices documents are stored

15:30-16:30 Desirable characteristics for the APS? First cut at priorities.
Discussion led by Siri Jodha and Stein Sandven. Coffee/tea available

16:30-17:00 Wrap-up of the three-day workshop and next steps, by Finn Danielsen, Martin Enghoff, Michael K. Poulsen

Friday 2 December: Departure

International participants: Flights from Aasiaat airport at 10.30 by Air Greenland, arrival Copenhagen 20.00 (duration 5 h 30 min).

Funded by the European Union's Horizon 2020 research and innovation programme through the CAPARDUS project under grant agreement No 869673, and by the Danish Agency for Science and Higher Education through the UArctic Thematic Network on Collaborative Resource Management

			28/11, arrive	29/11, arrive	30/11, depart	1/12, depart	2/12, depart	
Herizo	Andrianandrasana	Institute Global Sust. Development, Univ. of Warwick	12:10				10:30	
Caroline	Bouchard	Greenland Climate Research Centre	10:05		13:00			
Joachim	Christensen	Ministry of Agriculture ... Environment / NIPNAN	12:10				12:55	
Steen	Christensen	The Environmental Agency for Mineral Resource Activities	12:10				12:55	
Rannvá	Clementsén	Mineral License and Safety Authority / Råstofstyrelsen	12:10			10:20		
Henning	Dalager	Greenland Association of Fishermen and Hunters / KNAPK	X				X	
Finn	Danielsen	NORDECO	12:10				10:30	
Braulio F. S.	Dias	Universidade de Brasília	12:10			10:20		
Parnuna	Egede	Oceans North Kalaallit Nunaat	12:10				10:30	
Martin	Enghoff	NORDECO	12:10				10:30	
Per Ole	Frederiksen	Fisherman and Hunter, Coordinator of PISUNA Attu	X				X	
Hannah-Marie	Garcia	Indigenous Sentinels Network, Alaska	12:10				10:30	
Ane	Hansen	Mayor, Qeqertalik Municipality	(no accommodation)					
Rikke G.	Hansen	Greenland Institute of Natural Resources, Dept. Mammals & Birds	12:10				10:30	
Rasmus	Hedeholm	Sustainable Fisheries Greenland	12:10				10:30	
Robin	Holmvang	Ministry of Fisheries and Hunting / APN-Fiskeri	12:10				10:30	
Hans	Inûsugtoq (prop.)	Qeqertalik Municipality	(no accommodation)					
Paviarak	Jakobsen	Qeqertalik Municipality, Coordinator of PISUNA in Qeqertalik	(no accommodation)					
Nikkulaat	Jeremiassen	Greenland Association of Fishermen and Hunters / KNAPK	12:10				10:30	
Amalie	Jessen	Ministry of Fisheries and Hunting / APN-Fangst	12:10				10:30	
Jessica	Lefevre	Resource person, Alaska	12:10				10:30	
Rasmus J. F.	Lindholm	Mineral License and Safety Authority / Råstofstyrelsen	12:10			10:20		
Karl S	Marcussen	Fisherman and Hunter, PISUNA Attu	X				X	
Roel	May	Norwegian Institute for Nature Research (NINA)		X			X	
Vivianne	Mazzocco	PhD student, University of Copenhagen	12:10				X	
Søren S.	Nielsen	CAPARDUS	12:10				12:35	
Gerth	Nielsen	Part-time Fisherman and Hunter, Akunnaaq	X				X	
Johan	Nielsen	Fisherman and Hunter, PISUNA Attu	X				X	
Palle S.	Nielsen	Ministry of Agriculture ... Environment / NIPNAN	X				X	
Rasmus	Nygaard	Greenland Institute of Natural Resources, Dept. Fish & Shellfish	10:05				12:55	
Yuka	Oishi	Rural Sociologist, Kobe University	12:10				10:30	
Jørgen Isak	Olsen	Departementchef, Ministry of Fisheries and Hunting / APN	12:10		13:00			
Ina Elisabeth	Olsen	Interpreter	10:05				10:30	
Birger	Poppel	Ilisimatusarfik - University of Greenland	12:10				12:55	
Michael K	Poulsen	NORDECO	12:10				10:30	
Tida	Ravn	Interpreter	12:10				10:30	
Stein	Sandven	Nansen Environmental and Remote Sensing Centre (NERSC)	12:10				10:30	
Karl	Tobiassen	Naalakkersuisoq / Minister for Fisheries and Hunting	12:10		13:00			
Elmer	Topp-Jørgensen	Knowledge Co-Production Project & INTERACT, University of Aarhus	12:10				10:30	
Erneeraq	Ugpernangitsoq	Fisherman and Hunter, PISUNA Attu	X				X	